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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,076	02/16/2001	Sebastien Corbeil	016499-856	4892

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EXAMINER

VANOY, TIMOTHY C

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 06/18/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,076

Applicant(s)

CORBEIL

Examiner

VANOY

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on date-stamped May 27, 2003

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-22 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-22 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 12

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission mailed on May 21, 2003 (paper no. 11) has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having "ordinary skill in the art" has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9 and 12-22 are rejected under 35 U.S.C. 103(a) as obvious over the article titled "Production of polysulfide liquor in a kraft mill's causticizers" by Uloth et al.

The Uloth article describes a process for the preparation of polysulfides from Kraft white liquor containing sulfides by adding a catalyst comprising manganese oxides in an amount ranging from 0.16 to 0.18 grams/liter (please see pg. 225, middle column) and by sparging in either air at flow rates ranging from 30 to 150 liters/minute or oxygen at flow rates ranging from 15 to 90 liters/minute (please see Table II on pg. 227) so that the catalyst promotes the reaction between the sulfide and the oxygen to produce polysulfides. The table on the upper left hand of page 227 in the Uloth article reports that the amount of polysulfides produced ranges from 0.5 to 7 grams/liter over reaction times ranging from 0 to 250 minutes. The table on the upper left hand on pg. 228

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reports that the conversion selectivity ranges from about 15 to 90+ % as a function of reaction time and whether or not the runs were batch runs or continuous runs. On pg. 229, middle column, reaction temperatures ranging from 88 to 95 °C were reported.

The difference between the applicants' claims and the Uloth article is that the applicants' claims 1-3 and 15 report that the consumption rates of oxygen to achieve a selectivity of greater than 65%, whereas the table on pg. 228 in the Uloth article reports that selectivities range from about 15 to about 90+ %.

It is submitted that this difference (namely, reporting the consumption rates of oxygen set forth in at least applicants' claims 1-3 and 15) would have been obvious to one of ordinary skill in the art at the time the invention was made *because* the overlapping selectivities fairly suggests that the claimed oxygen consumption rates reported in at least applicants' claims 1-3 and 15 and the oxygen consumption rates inherently present in the process of the Uloth article must have also overlapped, consistent with the discussion of the *In re Wertheim* 541 F.2d 257, 191 USPQ 90 (CCPA 1976) court decision set forth in section 2144.05(I) in the MPEP (Feb. 2003).

Note that the rest of the process parameters (temperatures, times, etc.) reported in the applicants' claims at least overlap those process parameters reported in the Uloth article, and are, therefore, obvious, consistent with the discussion of the *In re Wertheim* 541 F.2d 257, 191 USPQ 90 (CCPA 1976) court decision set forth in section 2144.05(I) in the MPEP (Feb. 2003).

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Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article titled "Production of polysulfide liquor in a kraft mill's causticizers" by Uloth et al. as applied to claims 1-9 and 12-22 above, and further in view of U. S. Pat. 3,860,479.

The difference between the applicants' claims and the Uloth article is that applicants' claims 10 and 11 set forth that the temperature ranges from 75 to 85 °C (claim 10) or from 75 to 80 °C (claim 11).

U. S. Pat. 3,860,479 describes a similar process for catalytically converting sulfides present in paper pulping liquor into polysulfides at temperatures that may range from 50 to 90 °C (please see claims 9 and 11 in U. S. pat. 3,860,479).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made *to modify* the process described in the Uloth article *by using* reaction temperatures as low as 75 °C, in the manner reported in at least applicants' claims 10 and 11, *because* claim 11 in U. S. Pat. 3,860,479 is evidence that such temperatures are conventional and routine in processes for converting sulfides present in Kraft liquor into polysulfides, consistent with the discussion of the *In re Merck & Co. Inc.* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 703-308-2540. The examiner can normally be reached on 8 hr. days.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 703-308-3837. The fax phone

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numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Timothy Vanoy/tv
June 17, 2003


Timothy Vanoy
Patent Examiner
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